from immature or bleached specimens, but my new yellow specimen is perfectly normal, rendering this explanation improbable. Walker describes the abdomen as ferruginous, the base of the second and third segments testaceous.

EUCORDYLIGASTER Townsend

Eucordyligaster Townsend, Ins. Ins. Menst. **4**: 123. 1916.

The type was designated as *Cordyligaster septentrionalis* Townsend. Within recent years the National Museum has received a cotype of *Cordyligaster minusculus* Van der Wulp, which has been compared with the type of *septentrionalis* and proves to be the same species.

EUCORDYLIGASTER MINUSCULUS Van der Wulp

Cordyligaster minusculus Van der Wulp, Biologia, Dipt. **2**: 252, *pl. 6, f. 7, 7a.* 1891.—Banks, Ent. News **18**: 450. 1907.—Thompson, Psyche **17**: 212. 1910.—Johnson, Psyche **19**: 103. 1912.—Daecke, Ent. News **26**: 42. 1915.

Eucordylidexia minusculus Giglio-Tos, Ditt. del Mess. (pt. 3) 67. 1894.

Cordyligaster septentrionalis Townsend, Ann. Ent. Soc. Amer., **2**: 212. 1909; Ins. Ins. Menst. **3**: 41. 1915.

The species, as already stated, occurs commonly about Washington. Daecke notes it at Marietta, Pa., the farthest north of the records. Thompson pointed out the synonomy of *septentrionalis*.

EUCORDYLIGASTER NYOMALA Townsend

Cordyligaster nyomala Townsend, Ins. Ins. Menst. **2**: 93. 1914.

Eucordyligaster nyomala Townsend, Ins. Ins. Menst. **4**: 123. 1916.

Known only in the single male type from Ñomala, Peru. It is readily distinguished from *septentrionalis* by its yellow palpi; the thoracic dorsum is covered with golden pollen with faint dark stripes in front; the antennae are dark red.

ENTOMOLOGY.—*Descriptions of new genera and species of Mallophaga, together with keys to some related genera of Menoponidae and Philopteridae.*[1] H. E. EWING, U. S. Bureau of Entomology. (Communicated by S. A. ROHWER.)

In the Chapin collection of ectoparasites, recently donated to the United States National Museum, are some rare, and in many instances unusual, Mallophagan specimens. These specimens, mounted by Dr. E. A. Chapin, are in excellent condition for showing many of those minute chitinous structures which are coming to have such an important part in our recent diagnoses of Mallophagan genera and species. In this paper six new genera are established. Although no figures are given, it is believed that the keys supplied will show probably more

[1] Received January 19, 1927.

clearly than figures would, the significant taxonomic characters and also the relationships of the newly established genera to the previously described ones. The generic concept used in establishing these genera predicates that all the species of the genus shall possess two or more correlated characters of more than specific importance. In addition to the six new genera proposed, seven new species are described.

A New Species of Trimenoponidae

Philandesia foxi, new species

Forehead provided with only small setae. Antennae four-segmented; second segment with very broad, truncate process, bearing two long setae at angle; last segment longer than broad. A short seta is situated on expansion over antennal fossa just in front of the eye.

Prothorax about two-thirds as broad as head and with a marginal row of about a dozen long setae, as well as a pair of small spine-like setae on the angles and another pair behind the first pair of long marginal setae. Pterothorax slightly broader than the prothorax and with straight, strongly divergent sides.

Each abdominal segment typically with a distinct, posterior, transverse row of setae and an indistinct anterior transverse row. Next to last segment of male about twice as long as the others. Last segment of female with a double comb of short, marginal setae.

Genital armature of male very peculiar. The structure taken to be the basal plate arises from about the middle of the abdomen and is divided into four processes; two short outer processes that are broadened and provided with a spine-like appendage distally; and two long inner processes. Parameres free, straight and broadened at their tips; endomeres united, extending beyond the tips of parameres.

Length of female, 2.42 mm.; width, 0.93 mm. Length of male, 2.20 mm. width, 0.81 mm.

Type host and *type locality.*—*Marmota flaviventris* from Brewster, Washington State.

Type.—Cat. no. 40135, U. S. N. M.

Described from one male (holotype) taken from type host collected 1918, by F. W. Logan, Brewster, Washington, and from one female collected at New York City, from a rat (*Rattus norvegicus*) and sent in by Dr. Carroll Fox. The manuscript name, without description, of this species was published in a list of ectoparasites of the genera *Rattus* and *Mus* for the New World by Fox in his "Insects and Disease of Man," page 217. This name, so published in 1925, is a *nomen nudum*, and becomes validated with this description. *P. foxi* differs from *P. townsendi* Kellogg and Nakayama in a number of characters. It has eight large setae on the posterior margin of the head instead of the four as on *townsendi*, and at least a dozen large marginal setae on the prothorax instead of the half dozen of the other species. This species is also related to species of *Dennyus* in a number of ways.

New Menoponidae

Acolpocephalum, new genus

Last antennal segment subhemispherical. Eyes degenerate, situated on margin just behind antennal notch. Pterothorax enlarged, broader and much longer than prothorax. Abdomen with nine segments, first and second similar. Legs very short and stout; femora inflated; first tarsal segment extending distally and overlapping second for over half the length of the latter. Tarsal claws very small and weak, almost vestigial on second and third legs.

Genotype and its *host species.—Acolpocephalum brevipes,* new species, from *Ptiloris victoriae.*

Only a single species is included at present in this new genus. The tarsal characters found in this species are different from those of any Mallophagan species known to the writer.

Acolpocephalum brevipes, new species

Head compact, as broad as long. Free margin of forehead almost but not quite, evenly rounded. Mandibles sharply pointed, without crushing surfaces or transverse ridges; left mandible slightly smaller than right and with two sharp, tooth-like projections at the end. Temporal lobes subquadrangular.

Prothorax about three-fifths as broad as the head, with rounded lateral margins and a peg-like spine on anterior corner. Pterothorax as broad as greatest width of abdomen, sides slightly outwardly curved and strongly divergent posteriorly. A few spine-like setae are situated at each posterior corner of pterothorax.

Abdomen about one and a half times as long as broad and with posterior end broadly and evenly rounded. A long seta springs from the lateral margin of each segment, which typically bears in addition a transverse row of setae.

Legs almost of the same size, but second pair slightly larger than the first and the third slightly larger than the second. Femora of all the legs about two-thirds as broad as long, those of third pair not quite as stout as those of the other two pairs. Tibiae of all legs very short and stout; those of first pair about one and a half times as long as broad at their distal ends. Last segment of each tarsus very stout, strongly curved on outer margin and terminated with minute to vestigial claws; claws on tarsus I best developed, the outer about twice as large as the inner.

Length of female, 1.11 mm.; width, 0.41 mm.

Type host and *type locality.—Ptiloris victoriae,* from Queensland, Australia.

Type.—Cat no. 40136, U. S. N. M.

Described from a single female (holotype) taken from skin of rifle bird, *Ptiloris victoriae,* from Atherton Tableland, Queensland, Australia.

Chapinia, new genus

Forehead greatly reduced, broadly rounded in front. Mandibles situated almost approximate to anterior, free margin of clypeus. Last segment of antenna capitate. Antennal fossa covered above by a transversely notched expansion of the head, the posterior part of which bears the double cornea of the eye on its free margin. Prothorax large, with almost straight, posteriorly convergent sides. Pterothorax undivided, with almost straight, posteriorly divergent sides. Abdomen broad, of nine segments in female and ten in male; first and second segments similar. First segment of each tarsus but slightly overlapping the second; tarsal claws well developed and subequal on each tarsus. Genital plate of male broad and flat, not rod-like.

Genotype and its *host species.*—*Chapinia robusta,* new species, from *Ceratogymna atrata.*

This genus is established for the single new species, and at the suggestion of Dr. Chapin, the collector of the specimens. It is related to *Actornithophilus* Ferris but differs from Ferris' genus in the shape of the forehead, position of the mandibles and type of genital armature of the male.

Chapinia robusta, new species

Head decidedly "hat-like," the almost straight contour of the sides of the forehead is continued far beyond the bases of the antennae and along the side of expansions over the antennal fossae. Mandibles small, equal, simple and pointed at tips. Antennae of typical *Menopon* type, but third segment revealing traces of its fused condition by breaking off easily near its base at suture line; last segment slightly longer than broad.

Prothorax about two-thirds as broad as head and bearing a conspicuous spine at each anterior corner. Pterothorax the mirror of prothorax considerably enlarged. At each posterior corner of pterothorax there is a lateral pecten of five or six spine-like setae, two of which in the female are much longer than those of the male.

Abdomen broad, constricted somewhat in front and bearing a few very long lateral setae, those on the seventh and eighth segments being especially conspicuous.

Genital armature of male large and heavily chitinized. Basal plate extending backward from fifth abdominal segment, it is broad and strap-like. Posteriorly the basal plate divides into two slender lateral arms and a stout, distally split central piece; which structures bear the parameres and endomere respectively. Parameres rather slender, upwardly curved, more or less hook-like structures which encompass the endomere laterally. Endomere large and curved, plate-like with a pair of lateral horns. Penis absent.

Legs long, the tibial segments particularly being slender. Patch of setae on each posterior femur pronounced. Second tarsal segments of all the legs very slender.

Length of male, 1.59 mm.; width, 0.70 mm. Length of female, 2.00 mm.; width, 0.95 mm.

Type host and *type locality.*—*Ceratogymna atrata* from Congo, Africa.

Type.—Cat. no. 40137, U. S. N. M.

Described from one male (holotype) and one female (paratype) collected by E. A. Chapin from the skin of hornbill, *Ceratogymna atrata*, taken November 3, 1917, at Nytonga, Congo, Africa.

Amyrsidea, new genus

Forehead reduced and evenly rounded in front. Antennae five-segmented (third segment showing suture near base), with last segment cylindrical. Antennal fossa covered above by a transversely sutured expansion of the head. Eyes wanting. Pharyngeal sclerite well developed. Prothorax large, without sternum, the sternal region being largely covered by the plate-like coxae of first pair of legs. Pterothorax broader than long and with straight posterior margin. Female with a whorl of conspicuous subequal spines on the posterior margin of last abdominal segment. Typically each abdominal segment is provided on each side ventrally with a brush of setae, smaller than those which clothe the body. Femora of third pair of legs each with a ventral patch of setae. First tibiae without spurs at distal ends; second and third tibiae provided with tibial spurs. First tarsal segment of leg I large and overlapping the second segment; first tarsal segment of legs II and III much smaller and not overlapping second segment. Subequal tarsal claws well developed on all the legs. Genital armature of male compact but complicated. Basal plate, plate-like, but very deeply incised posteriorly for the reception of the complicated endomeres and bearing thorn-like projections from the inside margins of lobes bounding incised space. Parameres free, movable appendages.

Genotype and its *host species.—Menopon ventrale* Nitzsch, from *Argusianus argus.*

This genus is established for the peculiar *Menopon* of *Argusianus* species The writer has examined three males and three females of this species taken from the argus pheasant, *Argusianus argus,* collected at Trong, Lower Siam, and one female from *Argusianus grayi* taken in West Borneo. The absence of eyes, the presence of tibial spurs on the second and third tibiae, the whorl of spines on the last segment of the female and the peculiar and complicated genital armature of the male constitute a striking combination of characters for the delimitation of the genus.

Numidicola, new genus

Forehead reduced and broadly rounded. Antennae long, five-segmented; third segment small and forming a pedicel to the fourth; fifth segment long, filiform. Antennal fossae roofed over above by an unsutured expansion of the head. Eyes vestigial and on the free margin of expansions over antennal fossae. Pharyngeal sclerite large, conspicuous. Prothorax very large, about as broad as head; prosternum wanting; large, plate-like precoxae meeting on median line. Pterothorax not larger than prothorax, very short, sides markedly divergent posteriorly. Abdomen with very short segments, eight in the male and nine in the female, each typically with a single transverse row of setae. First tarsal segment of each tarsus but slightly if at all overlapping the second. Each tarsus terminated distally with two well-developed, equal claws. Genital armature of male with rod-like basal plate, free parameres and large distally free endomeres.

Genotype and its *host species.—Numidicola longicornis,* new species, from *Numida ansorgii.*

Included with the type species in this genus is the *Menopon antennatum* of Kellogg and Paine. The combination of two characters is enough to distinguish this genus from the others of *Menoponidae*. These are the presence of long, filiform, five-segmented antennae and the position of the eyes on the margins of the undivided expansions of the head covering the antennal fossae.

Numidicola longicornis, new species

A fragile, very hairy, golden colored species. First segment of antenna slightly longer than broad; second segment cylindrical, twice as long as first; third segment minute, enlarged toward the tip, about half as long as the fourth; fourth about half as long as the fifth and broadest toward its distal end; fifth segment filiform, not clubbed, although it is broadest near the tip; it is about one and a half times as long as three and four combined. Eyes vestigial, without pigment, but showing two degenerate corneas.

Prothorax as broad as the head, broadly rounded posteriorly and bearing a marginal row of closely set, long setae. Pterothorax with a few spine-like setae on lateral margins and a row of close-set, long setae on posterior margin. Abdominal setae in close-set rows, some of them somewhat flattened. Last abdominal segment of male studded above with many short spines.

Genital armature of male: Basal plate long, flat, widening posteriorly; parameres long, slender slightly curved and blunt-pointed at tips; endomeres similar to parameres but stouter, attached to sac, outwardly curved. The endomeres extend posteriorly slightly beyond the parameres.

Hind legs slightly larger than the middle ones; femur III with ventral patch of setae. Tibiae II and III each with about eight spines on inner side, the more distal being the stoutest.

Length of male, 1.35 mm.; width, 0.64 mm. Length of female, 1.26 mm.; width, 0.71 mm.

Type host and *type locality.*—*Numida ansorgii* from British East Africa.

Type slide.—Cat. no. 40138, U. S. N. M.

Description based on five males and one female (two immature specimens were obtained) taken from the skin no. 243182 U. S. N. M., of the guinea, *Numida ansorgii*, collected at Tana River, British East Africa, August 26, 1912. This species differs from *N. antennatum* (Kellogg and Paine) in the shape of the antennal segments and in the structure of the genital armature of the male.

KEY TO SOME RELATED GENERA OF MENOPONIDAE, INCLUDING THOSE DESCRIBED IN THIS PAPER

1. Antennal fossae open above (ocular emarginations deep) or only slightly covered by expansions from head; last segment of antenna usually clavate, rarely capitate; temporal lobes large, somewhat subrectangular; eyes present, and not vestigial 2

Antennal fossae largely or entirely covered above by lateral expansions from the top of head; last segment of antenna variously shaped; temporal lobes rarely subrectangular; eyes usually present, but frequently degenerate 6

2. Posterior femora and abdominal sterna without definite ventral patches of setae, although combs of spines may be present 3

Posterior femora and certain abdominal sterna with definite ventral patches or brushes of setae 4

3. Pterothorax (meso-metathorax) enlarged, much larger than prothorax; first segment of each tarsus overlapping the second for about half the length of the latter; tarsal claws minute to vestigial. Small stout lice on parrots........................**Acolpocephalum**, new genus
   Pterothorax normal; first segment of each tarsus slightly or not at all overlapping the second; tarsal claws not vestigial **Colpocephalum** Nitzsch
4. Setae of femoral and sternal patches smaller than those clothing the body....................................**Heleonomus** Ferris
   Setae of femoral and sternal patches as large as those which clothe the body.. 5
5. Forehead broad and rounded with large mandibles in normal position; genital armature of male weak with long rod-like basal plate **Actornithophilus** Ferris
   Forehead reduced, triangular, with small mandibles situated approximate to the front margin of clypeus; genital armature of male large with broad basal plate............................**Chapinia**, new genus
6. Posterior femora and certain abdominal sterna with definite ventral patches or brushes of setae...................................7
   Posterior femora and abdominal sterna without definite ventral patches or brushes of setae...8
7. Pharyngeal sclerite present; second abdominal sternite sometimes with a pair of asters of heavy spines on posterior margin................8
   Pharyngeal sclerite wanting; second abdominal sternite never with asters of spines.....................................**Dennyus** Neumann
8. Temporal region of head of usual shape, and much broader than forehead and prothorax; posterior margin of last abdominal segment without row of spine-like setae; prosternum present; last antennal segment capitate **Myrsidea** Waterston
   Temporal region reduced, but little broader than forehead or prothorax; prosternum wanting; procoxae expanded into body sclerites; last antennal segment not capitate.....................................9
9. Expansion of head skeleton covering top of antennal fossa divided by a transverse suture; female with a row of stout spines on the posterior margin of last abdominal segment............**Amyrsidea**, new genus
   Expansion covering top of antennal fossa entire; female without spines on posterior margin of last abdominal segment **Numidicola**, new genus

NEW PHILOPTERIDAE

Echinophilopterus, new genus

Clypeus separated from head by distinct clypeal suture; appearing deeply incised in front because of the lateral chitinizations (clypeal bands) extending beyond the signature for about a third of their length. Trabeculae very large, long and rounded at their tips. Antennae short. Abdomen short, almost circular and bearing many short, stout spines below on first, second and possibly third or fourth segments. Other characters similar to those of *Philopterus* Nitzsch.

Genotype and its *host species.—Echinophilopterus chapini,* new species, from *Tanygnathus muelleri.*

This new genus is established for those parrot-infesting *Philopteri* that have the abdomen studded below with short, stout spines. It was suggested to the author by Dr. E. A. Chapin, who collected the type species. Besides the type species and another new one described in this paper, there are included in this genus some of the species in Piaget's *forficulatus* group. The writer was at first inclined to make *forficula* Piaget the type of this genus but changed his mind when it was observed that Piaget does not mention the group of spines on the ventral surface of the abdomen nor give any definite type host species for this louse.

Echinophilopterus chapini, new species

Head large for the size of body, with long forehead. Signature of clypeus much longer than broad, sides very slightly outcurved, and with a short, tongue-like anterior median process having a rounded hyaline margin. Lateral chitinizations of clypeus pronounced, extending beyond the signature by about a third of their length, pointed and hyaline at their tips; each bears two prominent, curved setae above. Trabeculae reaching to the middle of second antennal segment, slightly recurved and evenly rounded at tips.

Prothorax about two-thirds as large as pterothorax, sides straight and slightly divergent posteriorly. Pterothorax with a long seta on each lateral margin, in front of which is a small spine-like seta and behind which are two setae, the most posterior of which is the longer.

Abdomen almost as broad as long and in both sexes bearing below many short, stout, sharp spines which are situated chiefly on the first three segments. In three specimens one or more spines are also on the fourth segment.

Genital armature of male stout, compact and well chitinized. Basal plate about twice as long as wide, sides almost straight and subparallel. Parameres short, stout, outwardly curved hooks, in length equal to about half the width of basal plate. Endomeres wanting. A penis-like structure extends almost to the tips of parameres.

Length of male, 1.66 mm.; width, 0.71 mm. Length of female, 2.06 mm.; width 0.87 mm.

Type.—Cat. no. 40139, U. S. N. M.

Described from four specimens, two males and two females, taken from skins of a parrot, *Tanygnathus muelleri*, collected in the Celebes.

Echinophilopterus tanygnathi, new species

Head large, particularly the temporal region. Signature of clypeus much longer than broad, sides almost straight and parallel; a short, tongue-like projection extends from the middle of the anterior end of the signature. Lateral chitinizations of clypeus very long, with anterior free ends expanded, inwardly cupped and hyaline; above slightly in front of the middle each bears two long curved setae and near the base a single, straight seta. Trabeculae reaching almost to the middle of the second antennal segment, decidedly broadened at their bases.

Prothorax almost as large as pterothorax, sides straight and very slightly divergent posteriorly. No lateral marginal setae on prothorax, but there is a minute spine and a much larger seta at each angle. Chaetotaxy of lateral margin of pterothorax: First a small spine, next a long more or less flagelliform seta equal to about half the width of the pterothorax, next a similar seta half as long, last a very long seta equal to three-fourths the width of the pterothorax.

Abdomen distinctly longer than broad. Ventral spines distributed over the central halves of the first three segments. Last segment of abdomen broader than long.

Length of female, 1.79 mm.; width, 0.73 mm.

Type host and *type locality.—Tanygnathus burbridgei* from Sulu Island, Philippine Islands.

Type.—Cat. no. 40140, U. S. N. M.

Described from a single female (holotype) taken from a skin of a parrot, *Tanygnathus burbridgei*, collected at Mt. Bud Dajo, Sulu Island, Philippine Islands, October 11, 1906.

Differs from *E. chapini* in having a longer central process on anterior end of signature of clypeus, in having shorter and stouter and differently shaped trabeculae and in some minor characters.

Physconelloides, new genus

Clypeus broadly and evenly rounded in front; clypeal suture present. Forehead with a pair of large, backwardly pointing, lateral horn-like or spine-like processes which arise from the chitinous thickening just behind the clypeal sutures. A similar but smaller pair of processes arise ventrally from the clypeus just in front of the clypeal sutures. Antennae short, second segment longest. Temporal lobes large, squarish. Eyes concealed from above the lateral expansions of the temporal lobes. Esophageal sclerite present and well developed. Prothorax smaller than the pterothorax, with sides strongly divergent posteriorly. Pterothorax short, but very broad with rounded lateral margins. Abdomen eight-segmented in both sexes. Genital armature of male very long and slender; basal plate composed of two long chitinous rods; parameres free, conspicuous; endomeres not united distally. Tarsal claws unequal, the inner being the stouter and having a different curve from the outer.

Genotype and its *host species.—Physconelloides ceratoceps*, new species, from *Leptotila ochroptera chloraucheuia.*

This new genus is clearly related to *Physconella* Paine but differs from Paine's genus in having the large horn-like process on the underside of the clypeus in addition to those on the sides of the forehead, and in having the angulate temporal lobes instead of rounded ones. The type species is the only one included in the genus.

Physconelloides ceratoceps, new species

Clypeus heavily chitinized along the front margin; ventral processes recurved, equal to the second segment of antennae in length. Lateral processes of head about one and a half times as long as ventral processes and overlapping most of the first antennal segment. Antennae short; first segment as broad as long; second segment about twice as long as broad and equal to three and four together; fifth segment distinctly longer than fourth.

Temporal lobes squarish, each with a minute spine-like seta on outer corner and two very long setae on posterior margin. Pharyngeal sclerite as broad as long.

Prothorax with a pair of setae just in front of posterior angles. Pterothorax about three times as broad as long, with lateral margins almost evenly rounded and each bearing a large seta near its middle.

Abdomen somewhat pear-shaped in outline with the broadest place behind the middle. Tergal and sternal plates apparently wanting. Pleural plates heavily chitinized and more or less united with each other. Abdomen almost nude except for three long lateral setae on each side of sixth segment and two on each side of seventh segment in the female and two large setae on each side of seventh segment and a posterior marginal pair on the eighth segment of male.

Genital armature of male very slender and delicate; basal plate arising from the chinitized base of first abdominal segment and extending through almost the whole length of the abdomen as two slender rods; parameres outwardly directed, almost straight processes thickened at their bases; endomeres free and similar to parameres.

Coxae of first pair of legs contiguous. Those of second pair of legs separated from each other for a distance about equal to the diameter of one of them by the expanded, plate-like epimera behind the first coxae. The inner tarsal claw of front leg is about twice as big as the outer and differently curved; it is also slightly larger than the outer one on the second and third pairs of legs.

Length of female, 1.65 mm.; width, 0.66 mm. Length of male, 1.11 mm.; width, 0.52 mm.

Type host and *type locality.—Leptotila ochroptera chloraucheuia*, from Argentina.

Type slide.—Cat. no. 40141, U. S. N. M.

Described from a male (holotype) and a female (paratype) taken from type host, a pigeon, which was collected at Rio Quia, Las Palmes, Argentina Chaco, July 17, 1920, by Dr. A. Wetmore.

Key to Some Related Genera of Philopteridae, Including the Two New Genera Described in this Paper

1. Forehead produced laterally into a pair of large, recurved horn-like processes 2
   Forehead not produced laterally into horn-like processes 3
2. Temporal lobes rounded; clypeus without ventral spine-like processes **Physconella** Paine
   Temporal lobes angulate; clypeus provided with a pair of large, spine-like processes on ventral side .... **Physconelloides**, new genus
3. Forehead with membranous flaps (more conspicuous in the male) projecting beyond the lateral margins. (The Giebeliinae of Waterston) . . 4
   Forehead without laterally projecting membranous flaps 5
4. Antennae the same in the two sexes. On petrels ...... **Giebelia** Kellogg
   Antennae different in the two sexes. On giant fulmars and shearwaters .... **Trabeculus** Rudow
5. Antennae alike in the two sexes; trabeculae very large and usually movable 6
   Antennae different in the two sexes. On owls ...... **Strigiphilus** Mjöberg

6. Forehead irregularly rounded and without hyaline margin to clypeus; trabeculae reduced, immovable, not reaching the distal end of first antennal segment. On owls.................. **Eustrigiphilus** Ewing
   Without such characters..7
7. Clypeal region expanded and with hyaline free margin throughout, but rounded and not emarginate in front; antennae very short. On geese, ducks and swans..................... **Anatoecus** Cummings
   Clypeal region not rounded in front with free hyaline margin..........8
8 Signatural plate divided; antennae long, with segment two distinctly longer than any of the others. On ibises........ **Ibidoecus** Cummings
   Signatural plate not divided...9
9. Clypeal margin deeply incised in front; abdomen bearing many short, sharp spines below. On parrots........ **Echinophilopterus**, new genus
   Clypeal margin not deeply incised in front; abdomen without spine on ventral surface..10
10. Clypeal region bearing above on each lateral chitinization (clypeal band) a tuft of three or more setae. Chiefly on cuckoos **Cuculoecus** Ewing
   Clypeal region not bearing such lateral tufts of setae
   Part of genus **Philopterus** Nitzsch and its derivatives, **Neophilopterus** Cummings and **Dollabella** Cummings.

PROCEEDINGS OF THE ACADEMY AND AFFILIATED SOCIETIES

WASHINGTON ACADEMY OF SCIENCES

194th MEETING

The 194th meeting of the ACADEMY and the twenty-seventh annual meeting was held at the Administration Building of the Carnegie Institution on the evening of Tuesday, January 13, 1925. The meeting was called to order by Vice-President HAZARD, who called upon the retiring President, A. L. DAY, to give his address entitled, *The study of earth movements in California.* President DAY gave a brief account of the events leading to the movement for the cooperative study of earthquakes and earth movements and the formation of the Advisory Committee of Seismology in order to make the cooperation effective. He mentioned the various lines of work, astronomical, geodetic, hydrographic, and geologic, as well as the strictly seismologic, that formed a part of the cooperative scheme, and outlined the parts taken by the various agencies doing this kind of work. Among the new instruments used in this investigation he mentioned the Anderson-Wood torsion seismometer and the sonic sounding device of the Navy Department. He concluded by saying: "Such a number of vigorous agencies, thus brought together, cannot fail to accomplish a great deal more than any one could do alone; such a representative group of agencies, I believe, cannot fail of success." President Day's address is published in full in *Science*, **61**: 323. March 27, 1925.

Following a brief intermission after the address, the annual business meeting of the ACADEMY was held. The minutes of the 26th annual meeting were read and approved. The Corresponding Secretary, FRANCIS B. SILSBEE reported briefly on the activities of the ACADEMY. During the year 35 persons were elected to regular membership, and Dr. SIGURD ORLA-JENSEN